

REMARKS

Claim 1 has been amended and claims 16-23 are canceled herein. New claims 24-27 have been added. Accordingly, claims 1-15, and 24-27 remain under prosecution in this application.

Response to Office Communication Dated September 30, 2004

This response, in part, corrects inadvertent omissions in the last amendment mailed August 17, 2004. Specifically, in the office communication dated September 30, 2004, the Examiner correctly pointed out that in claims 1, 24, 25, 26 and 27, the phrase "differentially heat the first and second group of particles, thereby increasing the" was omitted. This phrase has been added back into claims 1, 24, 25, 26 and 27. Also, in claim 5, the phrase "includes one or more nickel values" was inadvertently replaced by the phrase --includes one of more nickel values--. This error has been corrected and claim 5 now stands as it was originally filed. Except for the corrections made herein to claims 1, 5, 24, 25, 26 and 27, this amendment in all other ways is identical to the amendment filed August 17, 2004.

Restriction

The undersigned elected Group I (claims 1-15) for prosecution in this application. Accordingly, the undersigned hereby cancels the non-elected claims (Group II - claims 16-23) without prejudice, as being drawn to a non-elected invention.

35 USC §103

Claim 1, 3, 4, 7 are rejected under 35 USC § 103 as being unpatentable over Kelland or Ergun. The Examiner asserts that both Kelland and Ergun suggest the claim process of "exposing a mixture of particles to microwave energy to heat the particles. . ." The undersigned has amended claim and, in doing so, has removed the reference to microwave energy. Accordingly, claim 1 as amended is now limited to "... exposing the mixture of particles to millimeter wave energy. . ." Microwave energy is generally considered wave energy falling within the frequency range from 1000 MHz and upward. On the other hand, millimeter waves are electromagnetic radiation in the frequency range of 30-500 giga-hertz (see attached page 361 from the Radio Shack Dictionary of Electronics). Thus, in comparing these two definitions, it is easily seen that the millimeter wave portion of the spectrum falls within (i.e. is a subportion) of

the microwave energy spectrum. Claim 1, as amended, specifically claims the millimeter wave portion of the spectrum wherein the applied references teach applying electromagnetic waves in the microwave portion of the spectrum. Because the claims are directed to a narrow range and the references teach a broad range, there is no teaching with "sufficient specificity" to constitute a rejection of claim 1. Specifically, there is no motivation for one skilled in the art to use the specific claimed millimeter wave spectrum simply because the broader microwave spectrum is known. For this reason alone, the undersigned believes that claim 1 is now in condition for allowance.

New claim 24 has been added. New claim 24 includes the limitations of originally submitted claims 1 and 2. None of the references of record teach or suggest the invention set forth in new claim 24 and accordingly, the undersigned believes that new claim 24 is now in condition for allowance.

New claim 25 has been added. New claim 25 includes the limitations of originally submitted claims 1 and 5. None of the references of record teach or suggest the invention set forth in new claim 25 and accordingly, the undersigned believes that new claim 25 is now in condition for allowance.

New claim 26 has been added. New claim 26 includes the limitations of originally submitted claims 1 and 6. None of the references of record teach or suggest the invention set forth in new claim 26 and accordingly, the undersigned believes that new claim 26 is now in condition for allowance.

New claim 27 has been added. New claim 27 includes the limitations of originally submitted claims 1 and 8. None of the references of record teach or suggest the invention set forth in new claim 27 and accordingly, the undersigned believes that new claim 27 is now in condition for allowance.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Application No.: 10/080,773

Docket No.: 209533-81444

Any fees due with the filing of this paper are believed to have been paid with the filing of the August 17, 2004 amendment and, accordingly no fee is believed to be due with the filing of this amendment. If any additional fees are due with the filing of this amendment, please charge our Deposit Account No. 503145, under Order No. 209533-81444 from which the undersigned is authorized to draw.

Dated:

Respectfully submitted,



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